Comments on
Proposed General Plan Update Goals, Policies, and Implementation Actions

Energy

San José will conserve energy, reduce energy consumption per capita, and adopt renewable energy technologies so that, as the City develops, the City's overall Carbon Footprint remains the same or is reduced. San José residents and businesses will have access to clean, renewable, and reliable energy (i.e., energy security).

Reduce Consumption and Increase Efficiency

Goal E-1 Reduce per capita energy consumption by at least 50% of 2008 levels by 2022 and maintain or reduce net aggregate energy consumption levels equivalent to the 2022 (Green Vision) level through 2040. **<< This is an extremely ambitious goal. (1) It should certainly say, "reduce per capita energy consumption from non-renewable resources.,," (If someone generates their own electric power from a roof-type solar array, the city shouldn't care how much energy they use. (2) Is "per capita" the best measure for this goal? What if San Jose is successful in attracting more business relative to population growth, as we wish? Per capita energy consumption would grow even if every individual used the same amount of energy. (3) I wonder, how on earth will the City measure this quantity to see whether we meet this goal? >>**

E-1 Energy Efficiency Policies

Policy E-1.1 Promote job and housing growth in areas served by public transit and that have community amenities within a 20-minute walking distance. **<< Public transit certainly has to be improved if the City wants to be serious about getting people out of cars. Moreover, if the City is serious, I think it has to consider imposing some disincentives to the use of cars; for example, (a) Removing free on-street parking; (b) Requiring companies to charge employees for using parking lots; (c) Having schools charge students for using parking lots; (d) Actively discouraging parents from driving kids to school (e.g. by enforcing no-standing rules on streets around schools at the end of day.) In my judgement, unless severe measure are taken to discourage the use of cars (or unless the price of gas sky-rockets), people will continue to drive to work and to shop and to school. >>**

Policy E-1.2 Enhance existing neighborhoods by adding a mix of uses that facilitate biking, walking, or transit ridership through improved access to shopping, employment, community services, and gathering places. **<< To facilitate biking, people have to feel safe about going places on their bike, and have to have secure places to park. >>**

Policy E-1.3 Require all new residential construction to be designed for zero net energy use by 2020 and all new commercial construction to be designed for zero net energy use by 2030. **<< Fantastic, but how on earth do we expect to achieve this? I know, single family houses can be designed for zero net energy use by using solar panels and solar hot water heaters, but I doubt whether there is enough roof area to achieve the same thing in multi-story housing units. Seriously now, does this policy make sense? >>**

Policy E.1.4 Require third-party-verified Carbon Footprint projections associated with construction and operation of new development during design review of development applications and as a prerequisite for any funding incentives.

Policy E-1.5 Implement the City's Green Building Policies (see Green Building Section) so that new and existing construction fully implements industry best practices, including the use of optimized energy systems.

E-1 Energy Efficiency Actions

Action E-1.6 Replace 100% of the City's traffic signals and streetlights with smart, zero emission lighting by 2022. **<< "Zero emission lighting"? What will these lights be? Are they going to use no electric power then? Or will they all have their own solar cells and batteries? >>**

Action E-1.7 Require full costing analysis of energy-related carbon emissions as part of the discretionary review process for new development and renovation projects. **<< Frankly, I don't think carbon emission costing is at all practical. Not in any rigorous sense. Not if we're talking about knowing the cost in carbon emission of the manufacture and transportation of the building materials used in the project, and of the construction of the project itself, plus the transportation of the workers, etc. And if it's not going to be done rigorously, and with uniform methodology, then why do this at all? This is an invitation to a lot of fudging, in my opinion. >>**

Action E-1.8 Measure annually the share of the City's total Carbon Footprint resulting from energy use in the built environment, transportation, and waste management. **<<How on earth are we going to measure the City's total carbon footprint? I think this is really a pie-in-the-sky action. >>**

Renewable Energy

Goal E-2 Receive 100% of electrical power from clean renewable sources (e.g., solar, wind, hydrogen) by 2022 and to the greatest degree feasible increase generation of energy within the City to meet the City's energy consumption needs. **<< (1) It doesn't make sense to promote generation within the City if we want to maximize the use of clean renewable sources. (Although maybe the weasel words "to the greatest degree feasible" offer a kind of escape clause. Most renewable sources (solar thermal arrays; wind; geothermal; hydrothermal; perhaps tides) are found <u>outside</u> the city, sometime distant from the city. But the transportation of electrical energy is very efficient and ought to be encouraged. (2) And where is the hydrogen supposed to come from? Why do you think hydrogen is renewable? (3) By requiring "renewable sources", this rules out nuclear power. Is this wise? Many experts see using substantial amounts of nuclear power as the only realistic way of reducing the production of carbon dioxide. (I'm of two minds on this question – I just wanted to raise the question before the policy rules it out. Perhaps state that if nuclear power is approved on the national level, electricity so generated should be allowable under this policy in San Jose. >>**

E-2 Renewable Energy Policies

Policy E-2.1 Remove demand-side barriers to adoption of a diverse array of renewable energy and energy efficiency technologies. Demand-side barriers include

- Cost

- Difficulty getting small-scale products to market
- Workforce availability
- Lack of public awareness about products' needs and availability
- State/Fed policies not supporting a diverse array of technologies

Policy E-2.2 Lead globally in adopting technologies that transform solid waste and biosolids (i.e., the solids that remain after wastewater treatment) into useable energy.

Policy E-2.3 Support the installation of at least 100,000 solar roofs in San José by 2022 and at least 200,000 solar roofs by 2040. **<< The policy should explicitly state support for the installation of solar hot water heaters. I certainly favor solar photovoltaic generation (I have a photovoltaic system myself), but solar hot water heaters are much more efficient (in BTU/$) than solar electric generation. >>**

Environmental Stewardship and Innovation

Goal E-3 Lead globally in renewable energy efficiency research and development, innovation, and urban-scale renewable energy generation.

E-3 Energy Stewardship/Innovation Policies

Policy E-3.1 Promote local innovation, research, development, and deployment of renewable energy and energy efficiency technologies.

Policy E-3.2 Showcase and apply innovative technologies within San Jose, including developments that achieve maximum energy efficiency or net zero energy, and renewable energy systems that generate energy equal to or greater than that consumed on site. **<< As mentioned above, I seriously doubt whether this is possible in multi-story units. >>**

E-3 Energy Stewardship/Innovation Actions

Action E-3.3 Utilize municipal facilities to showcase the application of outstanding, innovative, and locally developed energy efficiency and renewable energy technologies and practices, to demonstrate the effectiveness of these technologies and to highlight the City's energy leadership.

Action E-3.4 Host local competitions, high profile events, conferences, and symposia to promote energy efficiency and renewable energy.

Action E-3.5 Monitor building industry and workforce needs and provide robust professional training opportunities, partnering with relevant local workforce and development industry partners.

Action E-3.6 Train municipal code enforcement and development review staff in state-of-the-art HVAC and insulation industry standards, best practices, and resources to ensure buildings are constructed in compliance with those industry standards and best practices.

Energy Security

Goal E-4 Provide access to clean, renewable, and reliable energy for all San José residents and businesses.

E-4 Energy Security Policies

Policy E-4.1 Require minimum renewable energy components generation capacity on affordable housing developments. **<< This is poorly worded. What are we trying to say here? That affordable housing developments are not required to have any energy generation on site? (The "minimum" would be zero.) Or do we mean that even affordable housing developments will be required to have a certain (lower) baseline of on-site energy generation? >>**

Policy E-4.2 Promote availability of a variety of tools and services for implementing energy conservation and renewable energy generation, including financing districts, energy auditing, and energy efficiency retrofit services to all residents and business owners.

Policy E-4.3 Explore neighborhood-based distributed energy generation as an enhancement or alternative to the traditional electric power system and to reduce the amount of energy lost in transmitting electricity over long distances. **<< Energy losses from transmission lines are relatively low. They may be well compensated for by the increased efficiency of large-scale generation projects. It is one thing if we want to promote neighborhood-based energy generation because we think it is more secure, but let's then not claim heightened efficiency as the motivation for such a policy. >>**

Policy E-4.4 Create partnerships and governance structures that improve the overall efficiency and reliability of energy production and supply. Explore the creation of a jurisdiction-wide energy utility. **<<And just what is a "jurisdiction-wide energy utility"? >>**

E-4 Energy Security Actions

Action E-4.5 Partner with public, private, and non-profit agencies on public outreach and education on energy efficiency programs and services.

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